

ABSTRACT OF THE DISCLOSURE

The present invention provides a purified preparation containing a polynucleic acid encoding at least one polypeptide selected from the group consisting of proteins 5 encoded by one or more open reading frames (ORF's) of an Iowa strain of porcine reproductive and respiratory syndrome virus (PRRSV), proteins at least 80% but less than 100% homologous with those encoded by one or more of ORF 2, ORF 3, ORF 4 and ORF 5 of an Iowa strain of PRRSV, proteins 10 at least 97% but less than 100% homologous with proteins encoded by one or both of ORF 6 and ORF 7 of an Iowa strain of PRRSV, antigenic regions of such proteins which are at least 5 amino acids in length and which effectively stimulate immunological protection in a porcine host 15 against a subsequent challenge with a PRRSV isolate, and combinations thereof, in which amino acids non-essential for antigenicity may be conservatively substituted. The present invention also concerns a polypeptide encoded by such a polynucleic acid; a vaccine comprising an effective 20 amount of such a polynucleic acid or protein; antibodies which specifically bind to such a polynucleic acid or protein; methods of producing the same; and methods of raising an effective immunological response against a PRRSV, treating a pig infected by a PRRSV, and detecting a 25 PRRSV.